

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of forming a catalyst body, comprising:

forming a first layer of hemispherical grain polysilicon over a substrate; ~~and~~

oxidizing at least a portion of said first layer to form a second layer of silica over said substrate; and

forming a catalyst material over said silica layer.
2. (Cancelled)
3. (Original) The method of claim 1, wherein said second layer is oxidized using thermal oxidation.
4. (Original) The method of claim 3, wherein said oxidizing is performed at a temperature within the range of about 350 to about 750 degrees C.
5. (Original) The method of claim 4, wherein said oxidizing is performed for a period of about 1 to about 10 minutes.
6. (Original) The method of claim 5, wherein said oxidizing is performed for a period of about 1 to about 5 minutes.
7. (Original) The method of claim 4, wherein said oxidizing is performed at a temperature within the range of about 400 to about 500 degrees C.
8. (Currently Amended) The method of claim ~~[[2]]~~ 1, wherein said method further comprises annealing said catalyst material.

9. (Original) The method of claim 8, wherein said annealing produces at least one cluster of said catalyst material.

10. (Currently Amended) The method of claim [[2]] 1, wherein said method further comprises forming a nitride layer over said silica layer and ~~depositing~~ forming said catalyst material over said nitride layer.

11. (Original) The method of claim 10, wherein said nitride layer is silicon nitride and is formed from a nitrogen-containing compound.

12. (Original) The method of claim 11, wherein said nitride layer is about 1 to about 500 Angstroms in thickness.

13. (Original) The method of claim 11, wherein said catalyst material is at least one member selected from the group of transition metals.

14. (Original) The method of claim 13, wherein said catalyst material is selected from the group consisting of ruthenium, palladium, platinum, and rhodium.

15. (Original) The method of claim 1, wherein said first layer is formed using LPCVD, CVD or RTCVD.

16. (Currently Amended) The method of claim [[2]] 1, wherein said catalyst material is deposited using CVD or PVD.

17. (Original) The method of claim 1, wherein said first layer is formed by depositing amorphous silicon using CVD or LPCVD.

18. (Original) The method of claim 17, wherein said first layer is annealed following said deposition.

19. (Original) The method of claim 17, wherein said deposition is at a temperature within the range of about 400 to about 600 degrees C.

20. (Original) The method of claim 19, wherein said deposition is at a temperature within the range of about 450 to about 550 degrees C.

21. (Original) The method of claim 17, wherein said first layer is formed to a thickness of about 25 to about 200 Angstroms.

22. (Original) The method of claim 21, wherein said first layer is formed to a thickness of about 50 to about 100 Angstroms.

23. (Currently Amended) The method of claim ~~[[2]]~~ 1, wherein said catalyst material is deposited to a thickness within the range of about 5 to about 500 Angstroms.

24. (Currently Amended) The method of claim ~~[[2]]~~ 1, wherein said catalyst material is annealed to form a bump-like structure.

25. (Original) The method of claim 8, wherein said catalyst material is annealed to form a bump-like structure.

26. (Original) The method of claim 24, wherein said catalyst material forms an overhang region with respect to an underlying layer.

27. (Original) The method of claim 25, wherein said catalyst material forms an overhang region with respect to an underlying layer.

28. (Currently Amended) A method for forming a catalyst structure, comprising:

forming a barrier layer over a layer of silica, said layer of silica being formed from hemispherical grain polysilicon; and

depositing a layer of catalyst material over said barrier layer so as to form a catalyst body.

29. (Cancelled)

30. (Currently Amended) The method of claim ~~29~~ 28, wherein said barrier layer is a layer of silicon nitride which is formed so as to be continuous.

31. (Currently Amended) The method of claim ~~29~~ 28, wherein said barrier layer is a silicon nitride layer which is formed so as to be discontinuous.

32. (Original) The method of claim 30, wherein said silicon nitride layer is formed using ammonia, ammonia plasma, and rapid thermal nitridation.

33. (Original) The method of claim 31, wherein said method further comprises annealing said catalyst material at a temperature within the range of about 200 to about 500 degrees C.

34. (Previously Presented) The method of claim 33, wherein said annealing is performed so that said catalyst material layer has a larger exposed surface area than prior to said annealing.

35. (Previously Presented) The method of claim 34, wherein said annealing converts said catalyst material layer into a substantially crystalline structure.

36. (Original) The method of claim 28, wherein said silicon nitride layer is formed to a thickness within the range of about 1 to about 500 Angstroms.

37-45. (Cancelled)

46. (Allowed) A method of forming a catalyst body, comprising:

forming a first layer of hemispherical grain polysilicon over a substrate;

oxidizing at least a portion of said first layer to form a second layer of silica over said substrate;

forming a third layer of silicon nitride over said second layer;

depositing a catalyst material on said silicon nitride layer; and

annealing said catalyst material to form a catalyst body such that said catalyst material has a larger surface area than just prior to said annealing.

47. (Allowed) The method of claim 46, wherein said oxidizing is performed using oxygen plasma for a period not to exceed about 5 minutes.

48-81. (Cancelled)